

# The Athenian Mercury.

Saturday, August 17. 1695.

Quest. 1. **I** Have been very Curious to know what Meteors are composed of, and to that intent have searcht all the Authors that I can find which treat of 'em, yet am not fully satisfied about it. I desire you to give as particular an account as you can of their composition, various kinds, manner of appearing, and common effects.

Ans. They are either fiery, airy, or watry; the fiery is composed of fume or a dry exhalation, which (the antients say) is kindled by vertue of the Heavens and Heat of the Air, or by *Antiperistasis*; but the modern account is more probable, which tells us, that many Sulphurous and Inflamable parts, scattered and roving about in the Air, meet with more of their own kind, with which combining they produce a mass of inflamable matter. To this if particles of another nature occur, they cause an emotion, attrition, or fermentation, (like water on unslaked lime, or as Spirits of Niter and Tartar do) which may so encrease as to become flame; this only continues so long as the sulphurous parts are in combination fit for mutual attrition, but when these are broke again and scatered abroad it ceases. The frequency of these Meteors, as to certain times and places, may depend partly upon the heavenly influences, according to the respective positions, whereby these inflamable matters are volatilized, and prepared for a more Copious ascent. Hence perhaps, it is that within the tropics are more abundant, and eminent fiery Meteors; as also in part from their bed in the Earth where they are generated, from whence they will not arise till sufficiently fermented. Bread, Beer, Wine, Syder, Moist Hay, &c. Have their respective times, which they require for the height of their fermentation, and these times again are varied according to the temper of the Air, and Season of the year, with other outward Circumstances. Besides, several parts of the Earth have greater quantities of Divers kinds of matter, as mineral Countries of Fossile Sulphur; Church-yards, places of Battail, Dung-hills, &c. have more of Animal fat; and Sea water may likewise have the Oyl of Fishes floating at the top, which may easily be drawn up by the Sun beams. These varieties cause different kinds of Meteors, in the several Regions of the Air.

In the Lower Region, the flying Dragon, of a viscous or Clammy fume, Crafts inflamed; and incurvated by some cold cloud, in, or through which it passes not far from the Earth. In a cold still night 'tis sometimes seen like a long flake of fire, hanging or gently passing through the Air, something resembling the smoke of a pipe of Tobacco, or candle just put out.

*Ignis fatuus*, the foolish fire, (Jack with a Lanthorn, or Will with a Wisp) this like the other is Crafts, heavy and nearer the Earth; one alone appearing, named *Helena*, was lookt upon by the ancients as an ill Omen; buttoo together, (called *Castor* and *Pollux*) as a preface of good fortune. This is said to lead men out of the way, into Ditches and Dirty places, because, in a dark night a person not well acquainted with his way, seeing a Light may approach nearer to it, expecting to find an house, or a man with a Lanthorn, but being deceived by it, instead of company he may find himself in a Ditch, the amazement of which has sometimes so disturb'd men, as to make them wander about all night, and they perceiving in the Morning they have not been far, have been apt to think themselves misled by an evil Spirit.

*Ignis Lambens*, the licking fire, is an inflammation of the steams proceeding from the body of a sweating animal, which without hurt seems to hang on the cloaths or hair, yet not so as to be brushed off, because, it is

renewed by continual steams, it happens chiefly when men have drank much, and in a still dark night ride hard to get home. The first in kindling probably is, (not only by *Antiperistasis*, if at all, but rather) by some spark of a flint trodden upon by a Nail in a horse or Mans shoe. Now as the steams of Spirit of Wine easily catch fire, so may the vinous Spirits (known and discovered by Chymists to be plentiful in the body of animals) when they are in any great quantity exhibited by perspiration.

In the middle Region, is the falling star, or star shooting, which was supposed to be a more compact and Globous matter, inflamed in those parts of the mass that were inflamable, and the rest which is Earthly and Watry to fall down in a Jelly. This appearance is generally in summer time, when the Earth sends more plentiful effluvia.

The burning lances; these in a dark night we have seen, many miles distant, arising out of a thick cloud, which seemed to be a segment of a Circle, appearing about the North Horizon, near twenty degrees high, not rising all alike, but some behind the rest like a company of pikes in a Counter-march, some would suddainly start up to 30, 60, or 70 degrees, and others fall down within 10 degrees of the cloud, and soon disappear, but still what remained were as bright as flame. The cause might be the swimming of sulphurous parts above a thick watery cloud, which being there inflamed, and having no humid ones above them, they freely blazed up in the place where the matter lay. The reason of their rising so small is probably because they were above the Atmosphere, and therefore no pressure to hinder their ascent, else would their flames have enlarged below, and joyning together have made one great blaze, as we see in our Culinary fires.

*Fulmen*, for which we want a proper English word, whose sound is called thunder, and its light Cornuscation or lightning; 'tis composed of three principal parts, Sulphur, Niter, and Water, and sometimes earthy and sandy mineral steams are mixt with them, which produces what is called the thunder-bolt; the manner how they are made, may be thus; there being of the three principal steams great quantities raised and held up, the Sulphur, and Niter meet together, and fermenting and working upon each other, in their struggle they beget a heat, this draws more steams to them, first of their own kind, because more volatile, and afterwards of water; Hence proceeds the thick cloud which we see gather and conglomerate in one place, as if the winds blew from all quarters, whereas in reality there is none stirring. These clouds being fully disposed to fall into rain, are yet held up by the attracting heat of this combustible stuff, something like which we may see by the steams of warm water set on the hearth which the fire draws towards it. The two active principles of Sulphur and Niter being thus enclosed, by the *Antiperistasis* of the cold clouds, augment their heat, till some parts which are more heated take fire, which presently seek more room for the flame to expatiate it self in; and because it cannot be found, it makes through the thick cloud, whose parts thus separated, yet pressing hard together, as soon as the flame is gone, fall one against another, and from that vacuity thus filled, issues the booming sound, but because the cloud is broken but by degrees the sound is continued in a long series of bounces, and those great or less according to the resistance made by the Clouds. Something like this may be observed in a great hot Iron when quenched in a Smiths Forge, for then in cooling, the fiery particles fly off, and break through the water, tho not



in a flame. In a gun the flame is better seen, but then the bounce is single, because the flame presently dilates it self every way when it is out of the gun, the Atmosphere being heavy enough to make one bounce, but not to keep the parts of the flame together. Hence it follows that if a gun were shot off in a thunder cloud, it would repeat its sound like the thunder, and if let off above the Atmosphere 'twould yield no sound at all. When the flame is out of the clouds if it breaks downwards we see its light immediately, but the sound, (tho it be formed at, or before the flames breaking forth) is somewhat longer in coming according to the distance of the cloud, of which distance an estimate may be made (by the means of a pendulum) compared to the distance of the light, and sound of a gun. After the fire and sound, at another distance of time comes the broken cloud in a shower, for now the heat of the flame holds it no longer up. For the water sets forth with the light and sound, yet it cannot break its way through the Atmosphere with the like expedition. If all the combustible matter does not fire at once, as it rarely does, then the lightening, thunder, and rain, are often repeated in several flashes, claps, and showers, till all the inflammable matter be spent. If the cloud breaking downwards be near the Earth, the lightening burns higher buildings, blasts plants, and hurts Animals. If the cloud break upwards we have thunder without lightening; And in Summer Evenings after extrem hot days if the cloud is not very cold and moist, we have lightening without thunder. If amongst the Nitro-Sulphurous parts, are any considerable quantity of Sabulous, ashy, or mineral parts, they are melted into a glass or metal, by the vehement or brisk fire, and breaking out with the fire does the work of a bullet, rending trees, and destroying Animals. This is called the thunder-bolt, which tho it may come soft through the cloud, in coming down generally hardens and congeals into a roll, the motion contributing to the figure. The blasting of lightening, where it burns not, seems to be from *Vitriolic, Arsenic*, or other Corrosive steams, which flung with vehemence by the lightening, and in small particles, enter the garment without change, and yet hurt the body. The turning of liquors by thunder into a sower taft, is only what may be done by Bells, Guns, Drums, or other vehement sounds, whereby the smart percussion of the Air causes all the vessels and liquor to vibrate, which so alters the site of those volatile parts, that preserve the liquor by their orderly Circulations, that they cannot do their office; the same concussion also gives motion to the Corruptible parts, which before were quiet in the Lees.

Not having room to speak here of the Meteors of the upper region, we shall defer it till a more convenient time.

Quest. 2. *I was formerly servant to a Gentleman, I received and disbursed some monies for him, I wrangled him of a small sum, and he is dead, and I did not make him Restitution, I am now servant to his only Son whom he made his Sole-Executor; I can restore it to him by the way of disbursement, as I may do secretly, or must I discover it to him? or pray what can I best do for the clearing of my Conscience in this case?*

Ans. You ought not only to restore the principal, but likewise to consider whether he sustained no further damage by your taking it; if he did, you must also make some satisfaction for that, all which may as well be done secretly as with his knowledge, since by giving the heir the money the injury is to the utmost of your power repaired. But as you have not only injured your master, but likewise offended God Almighty, so you must repent and beg his pardon, and confirm your repentance by an exact restitution.

### This Day is Published,

The 17th Volume of the *Athenian Mercury* is now published, Resolving all the most nice and curious ques-

tions proposed by Ladies and Gentlemen, relating to Divinity, Philosophy, Love, Marriage, History, Physick, Law, Mathematicks and Trade, &c. from Tuesday, April 2. to Saturday, July 12. 1695.

### Advertisements.

There is lately publisht a very particular account of the LIFE of the QUEEN, during her Residence in Holland, being—A COLLECTION of FUNERAL ORATIONS pronounc'd by publick Authority upon her Majesties Death, by Dr. James Perizonius, Professor of Eloquence, History and the Greek Tongue, in Leyden, Dr. George Grevius, Professor of Theology in Utrecht, and several other Learned men.—In this COLLECTION is inserted—That Excellent METHOD her Majesty observed in Reading the Holy Scriptures—The manner how she spent EVERY DAY in the week—Some extraordinary Instances of her conjugal fidelity.—Her Conference with the English Ambassadors at the Hague.—Many divine, moral and political expressions, as at several times, and on several occasions they were delivered by her.—With other Remarkable Passages in her LIFE and DEATH not hitherto made publick.—The whole attested by those Reverend and Honourable persons that attended upon her. Price 2 s. 6 d.—There is already publisht a FUNERAL ORATION upon the Queens Death, pronounc'd by publick Authority in the Hall of the most Illustrious States, upon the day of the Royal Obsequies, March 5. 1695. by the Learned SPANHEIMUS, (who had frequent access to her Majesty whilst she lived in Holland.) This is Printed in 4to, to bind up with the forementioned COLLECTION.

The Letter written by Sir D. UNCOMB COLCHESTER, a little before his Deah; containing his REMARKABLE PENITENCE (which Letter was read publickly by his order, in the Parish-Churches of Michael-Dean and Westbury) is now publisht, with other late Instances of that Nature. All which are annext to Mr. TURNER's Essay upon the Works of Creation and Providence, lately publisht. To which ESSAY is added a SCHEME of the History of Remarkable Providences, (now preparing for the Press.) As also a large Specimen of that Work. Price bound 2s.—Both Printed for John Dunton, at the Raven in Feten-street. And may also be had of Edm. Richardson near the Poultry-Church.

### Whereas PROPOSALS

have been made for Printing by Subscription—An History of all the Remarkable Providences which have happened in this present Age, &c.—By WILLIAM TURNER, M. A. and Vicar of Walberton in Suffex; This is to give Notice, That those that expect any benefit by the said PROPOSALS, are desired to send in their First Payment, (viz. 15 s.) with all possible expedition, the first of September next being the longest time allowed for taking in Subscriptions.—PROPOSALS and SPECIMENS, giving a full Account of this Work, may be had of the Undertaker, John Dunton, at the Raven in Feten-street, as also of Edm. Richardson, near the Poultry-Church, and of most Booksellers in London, and the Country.

If any Minister's Widow, or other person have any Library, or parcel of books to dispose of, if they will send a Catalogue of them, or notice where they are, to John Dunton, at the Raven in Feten-street, they shall have ready money for them, to the full of what they are worth.